Formative Assessment Task

2nd Grade: Geometry

**2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.**

**Learning Targets:**

* I can partition (divide) a circle and rectangle into two, three, or four equal parts.
* I can describe the equal shares with words (e.g., halves, thirds, fourths).
* I can describe a whole by the number of equal parts (e.g., two halves make a whole).
* I can explain and give examples to show that halves, thirds, and fourths of an identical whole need not be the same shape (e.g., half of a rectangle can be shown horizontally or vertically).

**Materials:**

1. One dry erase board, marker and eraser per student.
2. One set of fraction shape cards. (See below.)
3. One set of fraction description cards. (See below.)

**Directions:**

1. Teacher will distribute dry erase board materials to students.
2. Teacher will display one shape or one description card on a screen using the classroom document camera.
3. Teacher will instruct children to draw another shape that matches the fraction they see on the screen. Repeat.
4. Teacher will instruct children to draw a fraction that matches the description card they see on the screen. Repeat.

**Considerations:**

* Observe student responses.
* This game may be played with geoboards as well. (Show students the fraction or description card and students show shape on geoboard.)
* There may be more than one match per card.

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| halves | 3 equal parts | 2 equal parts =  1 whole | 4 equal parts |
| thirds | 2 equal parts =  1 whole | fourths | 4 equal parts =  1 whole |
| 4 equal parts | 4 equal parts =  1 whole | 2 equal parts | 3 equal parts =  1 whole |
| 2 equal parts | thirds | halves | 4 equal parts =  1 whole |

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| ::Screen shot 2012-07-16 at 7.57.54 PM.png | ::Screen shot 2012-07-16 at 7.58.10 PM.png | ::Screen shot 2012-07-16 at 8.00.07 PM.png | |  | | --- | |  | |  | |  | |  | |
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| Teacher notes:  Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.  This standard is the first exposure to some fractional concepts. This experience should allow students to divide circles and rectangles into equal parts. It is not necessary to define these as fractions with a numerator and denominator. Instead the focus should be on the terms halves, thirds, and fourths. When we divide a circle into two, three, or four equal parts, they can be described by half, thirds, and fourths. Emphasize that it takes two halves, three thirds, and four fourths to make the circle or rectangle.  Students who demonstrate full accomplishment draw/write the correct fraction with 90 - 100% accuracy.  Students who demonstrate substantial accomplishment draw/write the correct fraction with 75 – 89% accuracy.  Students who demonstrate partial accomplishment draw/write the fraction with 60 – 74% accuracy.  Students who demonstrate partial accomplishment divide their shape into parts that are not equal because they do not see how to draw the lines to make them equal. |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Not yet:** Student shows evidence of misunderstanding, incorrect concept or procedure | | | **Got It:** Student essentially understands the target concept. | | | | **NEEDS IMPROVEMENT**  **(N)** | | **WITH ASSISTANCE**  **(W)** | | | **INDEPENDENT**  **(I)** | | **0 Unsatisfactory:**  **Little Accomplishment**  The task is attempted and some mathematical effort is made. There may be fragments of accomplishment but little or no success. Further teaching is required. | **1 Marginal:**  **Partial Accomplishment**  Part of the task is accomplished, but there is lack of evidence of understanding or evidence of not understanding. Further teaching is required. | | **2 Proficient:**  **Substantial Accomplishment**  Student could work to full accomplishment with minimal feedback from teacher. Errors are minor. Teacher is confident that understanding is adequate to accomplish the objective with minimal assistance. | **3 Excellent:**  **Full Accomplishment**  Strategy and execution meet the content, process, and qualitative demands of the task or concept. Student can communicate ideas. May have minor errors. | |   Adapted from Van de Walle, J. (2004) Elementary and Middle School Mathematics: Teaching Developmentally. Boston: Pearson Education, 65 |